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New Species of *Alstroemeria* (Alstroemeriaceae) from Brazil

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**ABSTRACT.** Two new species of *Alstroemeria* L. (Alstroemeriaceae) from Brazil are described: *A. albescens* M. C. Assis from Rio Grande do Sul and *A. calliantha* M. C. Assis from Minas Gerais. Descriptions, comments, and illustrations are provided.

**RESUMO.** Duas novas espécies de *Alstroemeria* L. (Alstroemeriaceae) do Brasil são aqui descritas: *A. albescens* M. C. Assis do Rio Grande do Sul e *A. calliantha* M. C. Assis de Minas Gerais. Descrições, comentários e ilustrações são aqui apresentadas.

**Key words:** *Alstroemeria*, Alstroemeriaceae, Brazil, IUCN Red List, Minas Gerais, Rio Grande do Sul.

The genus *Alstroemeria* L. (Alstroemeriaceae) comprises perennial herbs that are erect and rhizomatous with storage roots. The leaves are sessile, simple, entire, generally resupinate (twisted near the base or along the lamina), and either concentrated toward the stem apex, distributed along the stem, or as a rosette on a short stem. Blades can be membranous, chartaceous, or leathery; linear, lanceolate, elliptic, or oblong; and either glabrous on both faces or papillose on the adaxial face. The inflorescence is terminal as an umbel-like, simple or branched cyme of two to many flowers or rarely the flowers may be solitary, wrapped within the leaflike bracts. Flowers are zygomorphic and bisexual, with six tepals petaloid and free, in two whorls. The tepals may be similar or different, the inner often shorter, patterned, and basally narrowed into a canaliculate base with nectariferous ducts. The stamens are six, free, and in two whorls. The anthers are pseudobasifixed, with longitudinal introrse dehiscence. The ovary is inferior,

syncarpous, 3-carpellate, and trilocular with axilar placentation; the style is apical, with three stigmas, and many anatropous ovules. The fruit is a dehiscent, loculicidal capsule, and the seeds are globose, without a sarcotesta.

Also known as the Lily of the Incas, *Alstroemeria* species and hybrid taxa have gained worldwide popularity as cut flowers due to their appearance and excellent keeping quality. They are also satisfactory for growing in pots and for use in gardens and landscaping.

The genus is restricted to South America and is found in a wide range of habitats including cloud forests, swamps, and desert areas, from the high Andes to marshy lands. Despite the lack of knowledge and studies regarding population dynamics, as well as the scarcity or absence of exsiccatae for *Alstroemeria* in most of Brazil, the restricted geographic distribution for most species suggests the vulnerability of its taxonomic populations, mainly from anthropomorphic actions.

Bayer (1987) recognized 31 Chilean species of *Alstroemeria*. Sanso (1996) reviewed the Argentinean *Alstroemeria* species and recognized 10 taxa with one endemic species. Taxonomic revision of the genus for Brazil (Assis, 2001) distinguished 38 species distributed in the eastern regions of the country, including 35 endemic species and 10 newly described species (Assis & Mello-Silva, 2004; Assis, 2002, 2003, 2004, 2006). With the recognition of two additional species, described below, the genus *Alstroemeria* in Brazil now comprises 40 species.

**1. *Alstroemeria albescens* M. C. Assis, sp. nov.**  
TYPE: Brazil. Rio Grande do Sul: Porto Alegre,

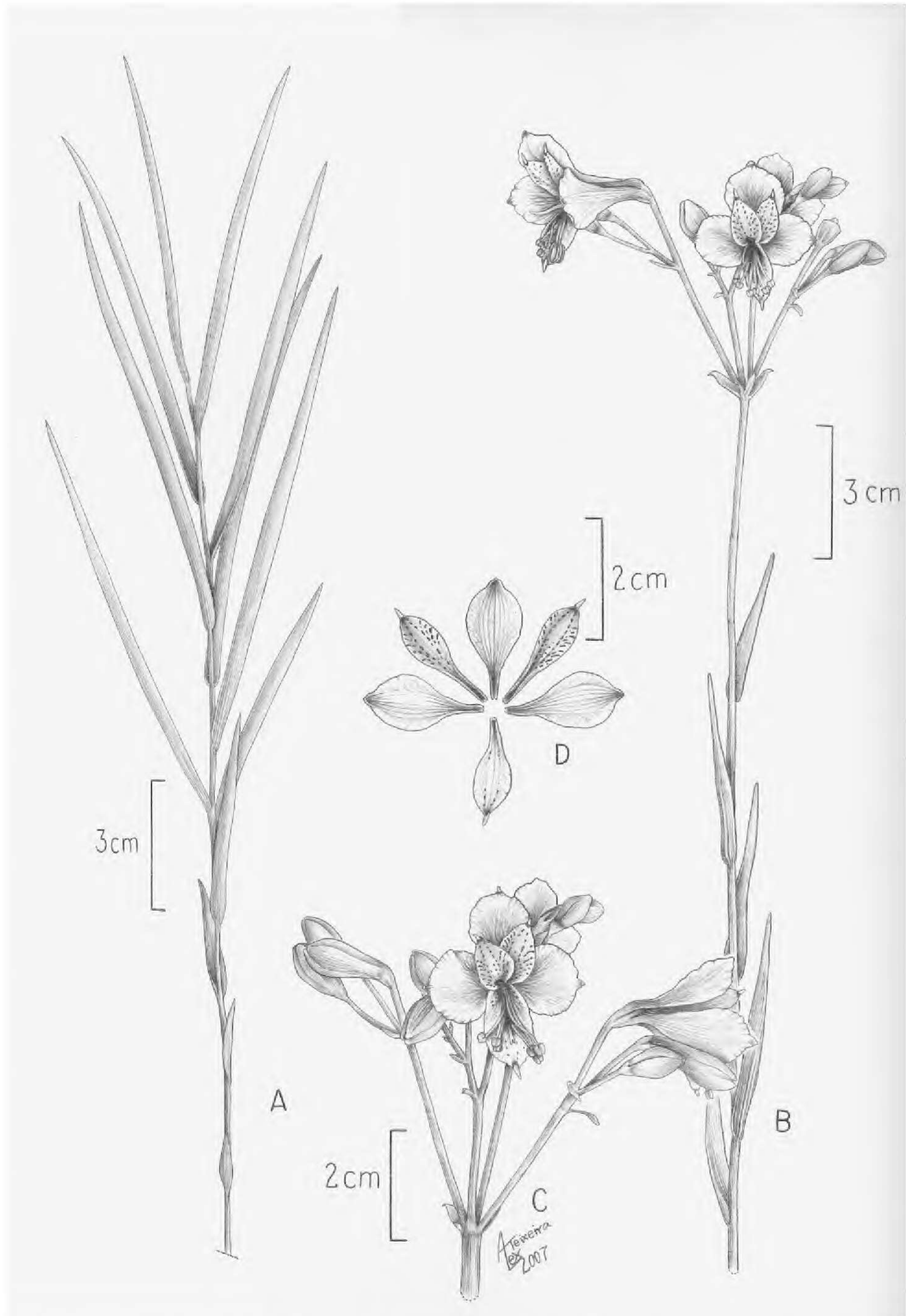


Figure 1. *Alstroemeria albescens* M. C. Assis. —A. Vegetative stem. —B. Reproductive stem. —C. Inflorescence. —D. Tepals, the inner ones spotted. Drawn from the holotype *Setúbal 204* (ICN).

Morro São Pedro, 30°11'24"S, 51°06'42"W, 130–160 m, 21 Jan. 2007 (fl.), R. B. *Setúbal 204* (holotype, ICN; isotypes, HB, K, MO). Figure 1.

Haec species quoad caules vegetativos *Alstroemeriae amabili* M. C. Assis, *A. malmeanae* Kraenzlin et *A. sellowianae* Seubert ex Schenk simillima, sed ab eis floribus albolilacinis atque tepalis internis rubropunctatis distinguitur.

Table 1. Morphological characters distinguishing *Alstroemeria albescens*, *A. sellowiana*, *A. amabilis*, and *A. malmeana*.

Character	<i>A. albescens</i>	<i>A. sellowiana</i>	<i>A. amabilis</i>	<i>A. malmeana</i>
Flower color	white-lilac	yellow-orange	orange-red	red
Inner tepal pattern	ruby-spotted	ruby-spotted	ruby-spotted	unpatterned
Flower length	2.2–3 cm	2.1–3.2 cm	2.5–3.5 cm	1.8–2.2 cm
Flower scent	absent	present	absent	absent

Perennial herb ca. 0.7 m tall; rhizome with storage roots; stems cylindrical, glabrous. Leaves of the vegetative stem evenly distributed along the stem, not resupinate, blade linear, 1.5–11.5 × 0.4–0.5 cm, coriaceous, apex acuminate, base cuneate, both faces glabrous; leaves of the reproductive stem distributed along the stem, not resupinate, blade linear or linear-lanceolate, 1.5–6 × 0.4–0.6 cm, coriaceous, apex acuminate, base truncate, both faces glabrous. Inflorescence an umbel-like, composite cyme of 3 to 10 flowers; pedicel glabrous, 2–2.5 cm; bracts leaflike, chartaceous, 0.8–0.9 cm; bracteoles membranous, 0.3–0.5 cm. Flowers patent, campanulate, white-lilac, 2.2–3 cm; tepals 6 in 2 whorls; the outer tepals unpatterned, all 3 very similar, spatulate; the upper one ca. 2 × 0.8 cm; the lower two ca. 1.9 × 0.7 cm; the inner tepals ruby spotted, all 3 very similar; the upper two ca. 1.9 × 0.5 cm; the lower one ca. 1.9 × 0.5 cm; stamens 6, included, filaments glabrous, ca. 1–2 cm; stigma included, style glabrous, ca. 1.5–1.6 cm. Capsules 1.3–1.5 × 0.7–1 cm.

*Habitat and distribution.* *Alstroemeria albescens* is endemic to the Morro São Pedro in Porto Alegre, state of Rio Grande do Sul, and is found on rocky outcrops at 130 to 160 m elevation.

*IUCN Red List category.* The new species is Data Deficient (DD) according to IUCN Red List criteria (IUCN, 2001), and needs further investigation.

*Phenology.* Flowers were collected from January to March.

*Etymology.* The epithet is from the Latin “albescens,” meaning “becoming white” or “whitish,” in reference to the color of the flowers.

*Discussion.* *Alstroemeria albescens* is characterized by its whitish lilac flowers and ruby-spotted inner tepals. The vegetative stems of this species are very similar to *A. amabilis* M. C. Assis, *A. malmeana* Kraenzlin, and *A. sellowiana* Seubert ex Schenk, which occur in the South Region of Brazil, from Parana to Rio Grande do Sul states. The new species can be differentiated from these related taxa by the floral characters indicated in Table 1.

*Paratypes.* BRAZIL. **Rio Grande do Sul:** Porto Alegre, Morro São Pedro, 30°11'24"S, 51°06'42"W, fl., *R. B. Setúbal*

246 (ICN), fl., *R. B. Setúbal* 200 (UEC); fr., *R. B. Setúbal* & *D. Fuhro* 201 (ICN).

## 2. *Alstroemeria calliantha* M. C. Assis, sp. nov.

TYPE: Brazil. Minas Gerais: Santa Maria do Salto, 40°03'22"S, 16°24'19"W, 21 Feb. 2005 (fl.), *J. R. Stehmann*, *J. A. Lombardi* & *R. C. da Mota* 4007 (holotype, BHCB). Figure 2.

Haec species praecipue quoad characteres florales *Alstroemeriae foliosae* Martius ex Schultz & Schultz f. simillima, sed ab ea foliis membranaceis subtus epappilosis per caulem floriferum sparse distributa econgusta distinguitur.

Perennial herb 0.7–1 m tall; rhizome with storage roots; stems cylindrical, glabrous. Leaves of the vegetative stems congested at stem apices, resupinate, blade oblong or elliptic, 9.5–18.5 × 2.2–3.4 cm, membranous, apex acute, base attenuate, both faces glabrous; leaves of the reproductive stem sparsely distributed along the stem, not resupinate, reduced, blade lanceolate or narrowly lanceolate, 2–3 × 0.2–0.3 cm, membranous, apex acuminate, base cuneate, both faces glabrous. Inflorescence an umbel-like, simple cyme of 2 to 5 flowers; pedicels glabrous, to 2.7 cm; bracts leaflike, membranous, 1–3.5 × 0.1–0.4 cm. Flowers patent, campanulate, reddish or yellow-red, 4.7–5 cm; the outer tepals unpatterned, these 3 similar, obovate, apex mucronate, base attenuate; the upper one 4.4–4.7 × ca. 1.5 cm; the lower two 3.9–4 × 1.4–1.5 cm; the inner tepals ruby striped, these 3 similar, elliptic, apex acuminate, base attenuate; the upper two 3.8–4 × 0.5–0.7 cm; the lower one ca. 3.4 × 0.4 cm; stamens included, filaments glabrous, ca. 3–3.5 cm; stigma included, style glabrous, ca. 2.8–3 cm. Capsules not seen.

*Habitat and distribution.* *Alstroemeria calliantha* is found rarely in transitional areas of caatinga and rainforest, in forest underbrush, in the state of Minas Gerais.

*IUCN Red List category.* The new species is Data Deficient (DD) according to IUCN Red List criteria (IUCN, 2001), and needs further investigation.

*Phenology.* Flowers were collected in February.

*Etymology.* The species epithet is derived from the Greek “calli-,” meaning “beautiful,” and “anthos,” meaning “flower.”

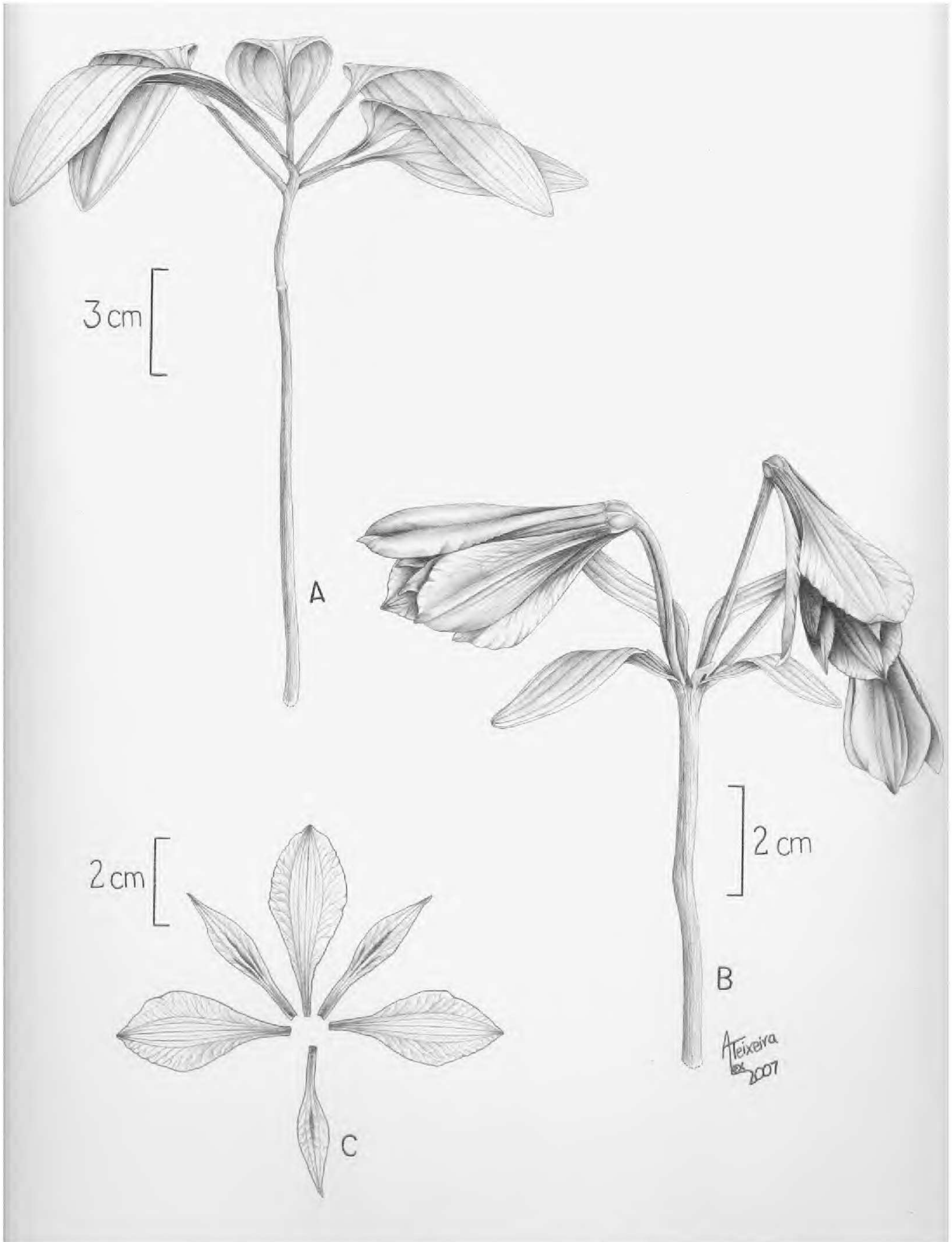


Figure 2. *Alstroemeria calliantha* M. C. Assis. —A. Vegetative stem. —B. Reproductive stem. —C. Tepals, the inner ones striped. Drawn from the holotype Stehmann *et al.* 4007 (BHCB).

*Discussion.* *Alstroemeria calliantha* may be recognized by its membranous and glabrous leaves that are congested at the apex of the vegetative stem and the few membranous, reduced leaves that are sparsely

distributed along the reproductive stem, as well as by the unpatterned outer tepals and ruby-striped inner tepals. This species is very similar to *A. foliosa* Martius ex Schultz & Schultz f., mainly in the floral

Table 2. Morphological characters distinguishing *Alstroemeria calliantha* and *A. foliosa*.

Character	<i>A. calliantha</i>	<i>A. foliosa</i>
Leaf texture	membranous	chartaceous or coriaceous
Leaf vestiture	not papillate abaxially	papillate abaxially
Vegetative leaf arrangement	congested at stem apex	congested along the stem
Reproductive leaf arrangement	sparse along the stem	congested along the stem
Leaf length of vegetative stem	9.5–18.5 cm	ca. 2.5 cm
Habitat	forest underbrush	high fields

characters. The two species differ by the coriaceous leaves that are papillate abaxially and congested along both the vegetative and reproductive stems in *A. foliosa* (Table 2).

*Paratype.* BRAZIL. **Minas Gerais:** Santa Maria do Salto, Fazenda Duas Barras, 16°23'54"S, 40°03'39"W, 750 m, fl., *J. A. Lombardi et al.* 5941 (BHCB).

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